recalculate a quotation using the list of product codes included in the quotation calculation result 11.

Then, in step S5, the quotation issuing section 12 is operated to issue a formal quotation using a result calculated by the quotation recalculation section 7. It should be noted that, when the list of product codes contains an error to the extent that a recalculation cannot be performed, the same is notified from the quotation recalculation section 7 to the quotation issuing section 12, and instead of a Web page displaying a quotation, a Web page displaying a message notifying that a quotation cannot be made is generated. It is noted that, for example, as described below, if the quotation is always recalculated whenever a formal quotation request is submitted from the user, the receiving terminal may transmit only the minimum data required for a quotation calculation to the server.

Fig. 4 shows a flowchart of an operation of the server that focuses on an operation of the timer section. In step S10 in the figure, when the Web page transmission section 4 of the server 2 shown in Fig. 1 transmits the Web page, the timer section 8 starts a timer in step S11. In step S12, when the data reception section 5 receives the quotation calculation result 11 from the receiving terminal 3, the timer section 8 stops the timer in step S13. Then, in step S14, the timer section 8 obtains from the timer the period of the time that has elapsed .

In step S14, the elapsed time is compared with a threshold value. The threshold value is set at to appropriate value, such as, for example, one-hour, three hours, three days or the like.

When the quotation calculation result 11 is received after a period of time longer than the threshold value, the process advances to step S16 to perform a recalculation. Thereafter, in step S17, a process for issuing a quotation described above with reference to Fig. 3 (b) is conducted. The processes in step S16 and step S17 are the same as those in step S6 and step S5 shown in Fig. 3 (b).

Since a Web page is transmitted to the receiving terminal, it is possible for the user to tamper with the Web page. In this connection, in the following example, a tampering detection program is added to the Web page 10. The tampering detection program has a function to examine whether or not data, such as, for example, unit prices of products have been altered.

When it is detected that the data has been altered, a result of the detection is included in a quotation calculation result to be transmitted to the server. As a result, the server side can automatically make a determination whether or not a recalculation should be performed. Of course, other measures that may be taken when a Web page is altered can be implemented. Such measures include, for example, sending a warning note to the user, prohibiting execution of a quotation calculation and the like.

For example, the Web page tempering detection program may successively obtain data for portions that should be prevented from being changed by tempering and perform a predetermined calculation process, and may make a determination of the presence or the absence of an alteration based on whether or not a result of the predetermined calculation process concurs with a predetermined value obtained in advance.

The calculation process may be conducted at any appropriate timing. It is difficult to detect an alteration in a Web page that is used by the user only from the quotation calculation result 11 that is returned from the receiving terminal to the server. Therefore, the inclusion of the tempering detection program in a Web page that is to be transmitted to the user described above is very effective.

For example, whenever a quotation request is issued, the server side may always perform a recalculation of the quotation and compare a result of the recalculation at the server side and the quotation calculation result 11 that is returned from the receiving terminal to the server to check if there is a discrepancy between the two. If there is a discrepancy between the two, a determination is made that a certain abnormality occurred during the calculation process for the quotation calculation, and a predetermined process is automatically executed. The predetermined process may include, for example, a method of searching in detail for a cause of the discrepancy that is generated, recording a result of the search and storing the same as data for improving the system.

For example, when a quotation calculation using a Web page is executed at the receiving terminal side, a method of storing log data indicating a process of the calculation may be employed. The log data together with the quotation result may be transmitted from the receiving terminal to the server, such that the server can make a detailed analysis thereof. For these purposes, the quotation result transmitted from the receiving terminal to the server, the user code and other data may preferably be stored even after the quotation recalculation is conducted.

Also, in addition to the above, a monitoring program may be added to detect a quotation calculation that violates a predetermined rule. When a quotation calculation program added to the Web page automatically performs a quotation calculation, the program may detect if data that should be added has not been added, an improbable value has been subtracted, a quotation result that appears to be improper in view of the number of the selected products has been provided, and the like. The calculation process can be made at any timing, but may be conducted simultaneously with the quotation calculation. The same effects as those provided by the tempering detection program can be provided.

Fig. 5 shows a flowchart of an example of the Web page tampering detection program and an operation of the monitoring program. A process indicated by a dot-and-dash line in the figure is an operation conducted by the monitoring program.

First, in step S20, the quotation-preparation button 15 shown in Fig. 2 is monitored; and only when it is clicked, the following operations are executed. In the following step S21, the tampering detection program obtains data at checkpoints in the Web page, and executes an operation for verification in step S22.

In step S23, a determination is made whether or not a result of the above operation is normal. When the result is normal, an error flag is turned off in step S24. On the other hand, when an abnormality is found, the process proceeds to step S25, and an error flag is turned on. In step S26, the error flag is included in a quotation calculation result. In other words, data for informing the presence or the absence of a detected abnormality to the server is set. Thereafter, in step S27, a result of the quotation calculation is transmitted. Also, the monitoring program proceeds from step S20 to step S28 and obtains a value for the quotation result 14 shown in Fig. 2. Then, in step as 22, the value is verified.

As described above, by the inclusion of the tampering detection program and the monitoring program in a Web page, the server side can be informed of whether or not the quotation calculation result 11 is normal. Therefore, an analysis process at the analysis section 6 is facilitated, and the load to the server is alleviated. Also, for example, determination results of the tampering detection program and the monitoring program may be displayed on the Web page. As a result, the user is notified that the quotation by the Web page is not valid. Furthermore, when necessary items are not inputted or parts of an impossible combination are selected, an error message may be displayed even the quotation-preparation button is clicked.

It is noted that the functional blocks shown in Fig. 1 may be formed from individual program modules, or may be formed from an integrated program module. Also, all of the functional blocks or a part thereof may be formed from hardware with logic circuits. Also, each of the program modules may be operated by implementing the same in an existing application program or may be operated as an independent program.

A computer program that realizes the invention described above may be stored in a computer readable storage medium, such as, for example, CD-ROM, and can be installed for the use. Also, the computer program can be downloaded onto a computer memory through the network for the use.

Also in the examples described above, the description is made with reference to the case in which a Web page is transmitted through a network to a receiving terminal, and a quotation calculation result is returned to a server. However, depending on the characteristics of the